



SF₆

Management and Future



About UK Power Networks



8.3M homes and businesses

28% of UK Total

9.3GW+ Distributed Generation Connected

32% of UK Total

16GW+ Peak Demand

28% of UK Total

SF₆ Management I

If the United Kingdom's commitment to achieving net zero by 2050 and UKPN's commitment to being a respected corporate citizen by minimising the negative impact of its activities on the environment, it is necessary to clarify our approach to the deployment of SF₆-filled equipment and the handling of SF₆.

Usage of SF₆-filled equipment

- Installing SF₆-free equipment, at the end of the useful life of current equipment, on our network as technically feasible solutions become available in the marketplace.
- Committed to connecting with research and organisational bodies that working on technology to minimise the environmental impact of SF₆ throughout its lifecycle in electrical equipment e.g. rapid leak repair technology and SF₆-alternative retro-fill solutions.
- Where there are space constraints which preclude the adoption of an alternative, SF₆ equipment should be used if the legal and regulatory regime allows its deployment.

SF₆ Management II

Management of SF₆ Lifecycle

- Leakage - repair or replace without undue delay
- Emissions Recording – in line with EREC S38
- Equipment Disposal – managed by licenced recycling company e.g. C.Soars
- Quality – must be in line with the requirements of IEC60376 and IEC60480
- Handling – must be done using approved equipment and F-gas competent personnel
- Recycling – employ services of approved organisations that can provide de-contamination and recycling services in a safe and efficient manner.
- Disposal – if unavoidable, to be carried out by approved organisations. Encouragement and support of innovative solutions that reduce the carbon intensity of the disposal solution.

Future of SF₆

- It is in decline as manufacturers and utilities pivot from SF₆ to SF₆-free alternatives which are more aligned with UK net zero aspirations.
- The supply of virgin SF₆ is likely to be proscribed in Europe in the next 5 -10 years
- There are SF₆-filled assets being installed now and for the next few years that will need to be managed carefully.
- There is a need to create a market for the recycled SF₆ that will be required to service the SF₆-filled assets still on the network.
- SF₆ will be required in declining quantities for up to the next 50 years.
- There is a possibility that the legal and regulatory standards for the management of SF₆ may be tightened and financial penalties introduced to motivate enhanced emissions performance
- SF₆-alternatives will continue to be developed, and their introduction will need to be managed carefully to ensure safety and technical performance is not compromised.